Q2

1. (Amended) A method for producing mutant polynucleotides comprising: [producing polynucleotides by] blocking or interrupting a polynucleotide synthesis or amplification process in a recombinant cell system by treating the cells with [a member] one or more agents that block or interrupt synthesis or amplification of a polynucleotide selected from the group consisting of UV light, one or more DNA adducts, DNA intercalating agents, DNA binding proteins, triple helix forming agents, competing transcription polymerase, cold or heat, chain terminators, and polymerase inhibitors or poisons[, said member being capable of blocking or interrupting synthesis or amplification of a polynucleotide] to provide a plurality of different recombinant polynucleotides due to said polynucleotides being in various states of synthesis or amplification, and subjecting said recombinant polynucleotides to an amplification procedure to amplify one or more of the polynucleotide or polynucleotides.

Sub C1

2. (Amended) A method [process] for producing a recombinant [mutant] polynucleotide[s] encoding a polypeptide having a desired property [by a series of steps] , said method comprising:

(a) producing a plurality of different oligonucleotides by blocking or interrupting a polynucleotide synthesis or amplification process with at least one member selected from the group consisting of UV light, one or more DNA adducts, DNA intercalating agents, chain terminators, and/or polymerase inhibitors or poisons, wherein said member is capable of blocking or interrupting polynucleotide synthesis or amplification [and] so as to provide a plurality of different single or double-stranded polynucleotides due to their being in various stages of synthesis [of] or amplification; [.]

(b) denaturing the [resulting] plurality of different single or double stranded [oligo]polynucleotides to produce a mixture of single-stranded polynucleotides[, optionally separating the polynucleotides into pools of polynucleotides having various lengths, and further optionally subjecting said polynucleotides to a priming

Q2 cont.

Sub C1

and amplification procedure to amplify one or more oligonucleotides comprised by at least one of the polynucleotide pools];

(c) incubating a plurality of said single stranded polynucleotides [or at least one pool of said polynucleotides] with a polymerase under conditions which result in annealing of said single-stranded polynucleotides at regions of identity between the single-stranded polynucleotides [and formation of] so as to form mutagenized double stranded polynucleotides [chain], and ;

[(d) repeating steps (c) and (d);]

(d) [(e)] expressing at least one mutant [polynucleotide] polypeptide from said mutagenized double stranded polynucleotides [chain, or chains; and

(f) screening said at least one mutant polypeptide for a useful activity]; wherein the polypeptide possesses a desired characteristic.

3. (Amended) The method of [A process according to] claim 2, wherein said DNA adduct is a member selected from the group consisting of: UV light; (+)-CC-1065; (+)-CC-1065-(N3-Adenine); a N-acelyated or deacetylated 4'-fluro-4-aminobiphenyl adduct capable of inhibiting DNA synthesis; trivalent chromium; a trivalent chromium salt; a polycyclic aromatic hydrocarbon ("PAH") DNA adduct capable of inhibiting DNA replication; 7-bromomethyl-benz[α]anthracene ("BMA"); tris(2,3-dibromopropyl)phosphate ("Tris-BP"); 1,2-dibromo-3-chloropropane ("DBCP"); 2-bromoacrolein (2BA); benzo[α]pyrene-7,8-dihydrodiol-9-10-epoxide ("BPDE"); a platinum(II)halogen salt; N-hydroxy-2-amino-3-methylimidazo(4,5-f)-quinoline; N-hydroxy-2-amino-1-methyl-6-phenylimidazo[4,5-f]-pyridine, DNA intercalating agents, DNA binding proteins, triple helix forming agents, competing transcription polymerases, chain terminators, and polymerase inhibitors or poisons.

4. (Amended) The method of [A process according to] claim 2, wherein said DNA adduct is a member selected from the group consisting of UV light, (+)-CC-1065 and (+)-CC-1065-(N3-Adenine).

Q2cont.

5. (Amended) The method of [A process according to] claim 4, further comprising heating said polynucleotides and removing the DNA adducts from said polynucleotides [or polynucleotide pools].

6. (Amended) A method for expressing a mutant polypeptide comprising producing a mutagenized polynucleotide by the method of [according to] claim 2 [and comprising the further steps of cloning] , wherein said mutagenized polynucleotide is cloned into a vector or an expression vehicle [and] for expressing said polypeptide.

7. (Amended) A vector or an expression vehicle including a mutagenized polynucleotide produced by the method of [according to] claim 2.

8. (Amended) A polypeptide comprising at least one sequence segment expressed from a mutagenized polynucleotide produced by the method of [according to] claim 2.

Please add the following new claims:

Q3

--9. (New) The method of claim 1, further comprising amplifying one or more of the recombinant polynucleotides.--

--10 (New) The method of claim 2, wherein steps (b) and (c) are repeated one or more times.--

REMARKS

Claims 1-8 were pending before this response. By the present communication, the Specification is amended at pages 21, 30, 64 and 65 to correct usage of various trademarks. In addition, claims 1-8 are amended, and new claims 9 and 10 are added. Support for the